

PATENT ABSTRACTS OF JAPAN

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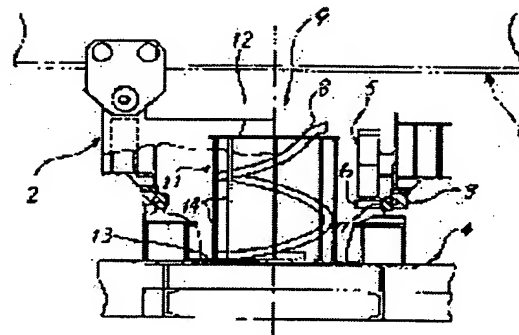
(54) POWER SUPPLY MECHANISM FOR REVOLUTION SECTION

(57)Abstract:

PURPOSE: To eliminate noise by disposing a power cable for transmitting power, signals, etc., having one end coupled with the fixed side, in a tubular guide body on the other end side thereof while winding spirally and connecting the other end with revolution side thereby preventing the revolution range from being limited within one revolution.

CONSTITUTION: A tubular cage 11 having vertical axis is disposed on the surface of a revolution body 4 in a revolution crane. A feeder cable 8 having one end secured to a gutter member 1 is inserted spirally into the cage 11 from the upper ring body 12 side and coupled, at the other end thereof, with a drive section on the revolution body 4 side while protruding outward from the lower side face of the cage 11, i.e., the surface of a lower ring body 13.

Resiliency of the feeder cable 8 itself eliminates trouble even if the revolution body 4 makes two revolutions. This mechanism does not limit the revolution range within single revolution and does not produce any noise as compared with a slip ring.



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CLAIMS

[Claim(s)]

[Claim 1] The electric supply device in the revolution section characterized by connecting the other end to a revolution side after carrying out winding arrangement of the other end side of the electric supply cable which transmits the power source by which the end section was connected with the fixed side, a signal, etc. spirally to the tubed guide inside of the body.

[Translation done.]

of the bottom ring object 13) of a basket object 11, and is connected with the mechanical component by the side of a revolving superstructure 4.

[0012] Moreover, the lifting and holding of the electric supply cable 8 in the interior of the above-mentioned basket object 11 are carried out by the coiled form tension spring 15 installed from the upper ring object 12, and he is trying to turn at it in an equal pitch.

[0013] In addition, in the neutral condition of being a revolving superstructure 4 at the time of not circling, in the condition of having considered as moderate curvature and having rotated to what one or one side, after curvature has rotated on a large next door and another side, the volume condition of the electric supply cable 8 in the above-mentioned basket object 11, i.e., curvature, is set up so that curvature may become small.

[0014] Thus, in the revolution section, since arrangement support of the electric supply cable 8 was spirally carried out into the tubed basket object 11, even when it rotates that a revolving superstructure 4 is also in 2 rotation extent or the rotation range beyond it with the elasticity which electric supply cable 8 self has, a problem does not arise. That is, a noise does not occur like the slip ring, without saying like before that the angle of traverse of a revolving superstructure is restricted to less than one revolution.

[0015] Next, the 2nd example of this invention is explained based on drawing 4. Although tension spring 15 was used for carrying out the lifting and holding of the electric supply cable 8 into a basket object 11 in the 1st example of the above As shown in drawing 4, while arranging a rod-like structure 24 in the example of **** 2 to the ring object 22 of the upper and lower sides of a basket object 21, and the core between 23 the perimeter of this rod-like structure 24 to the vertical direction -- every predetermined spacing -- and a radial, the shape of i.e., a spiral staircase, more than one protrude a bearing bar 25, and it is made to make these bearing bars 25 carry out installation support of the electric supply cable 8 spirally

[0016] By the way, in each above-mentioned example, although the basket object was attached in the revolving-superstructure side, even if it attaches a basket object in a girder material side, for example, the same effectiveness can be demonstrated. Moreover, as a tubed guide object, although the basket object was shown, you may be a barrel, for example.

[0017]
[Effect of the Invention] Since the guide inside of the body was made to carry out arrangement support of the electric supply cable spirally in the revolution section as mentioned above according to the configuration of this invention, even when it rotates that a revolution side is also in 2 rotation extent or the rotation range beyond it with the elasticity which the electric supply cable itself has, a problem does not arise. That is, a noise does not occur like the slip ring, without saying like before that the angle of traverse of the revolution section is restricted to less than one revolution.

[Translation done.]

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] the electric supply device in the 1st example of this invention is shown -- it is an abbreviation side elevation a part.

[Drawing 2] the electric supply device in this 1st example is shown -- it is a notching top view a part.

[Drawing 3] It is the important section perspective view of the electric supply device in this 1st example.

[Drawing 4] It is the important section perspective view of the electric supply device in the 2nd example of this invention.

[Description of Notations]

- 1 Girder Material
- 4 Revolving Superstructure
- 8 Electric Supply Cable
- 9 Electric Supply Device
- 11 Basket Object
- 15 Tension Spring
- 21 Basket Object
- 25 Bearing Bar

[Translation done.]

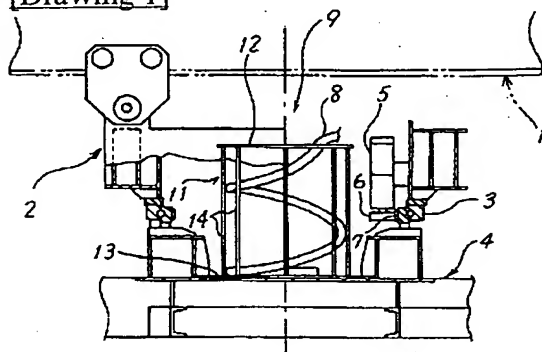
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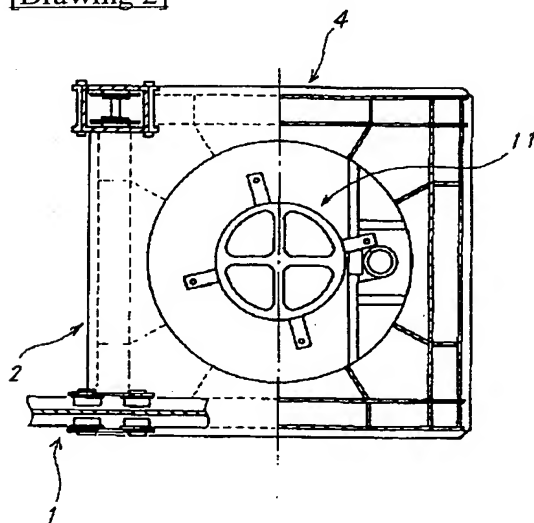
DRAWINGS

[Drawing 1]

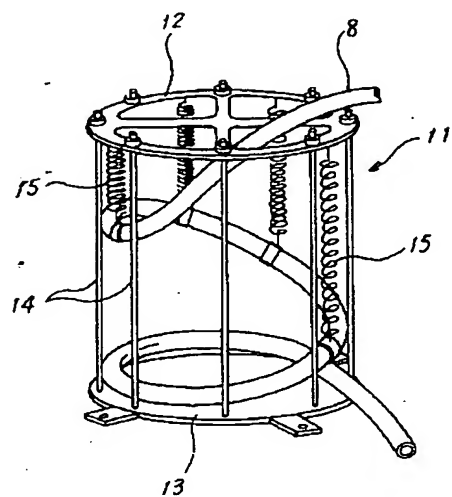


- 1---ガード部材
- 4---旋回体
- 8---給電ケーブル
- 9---給電機構
- 11---胴体

[Drawing 2]

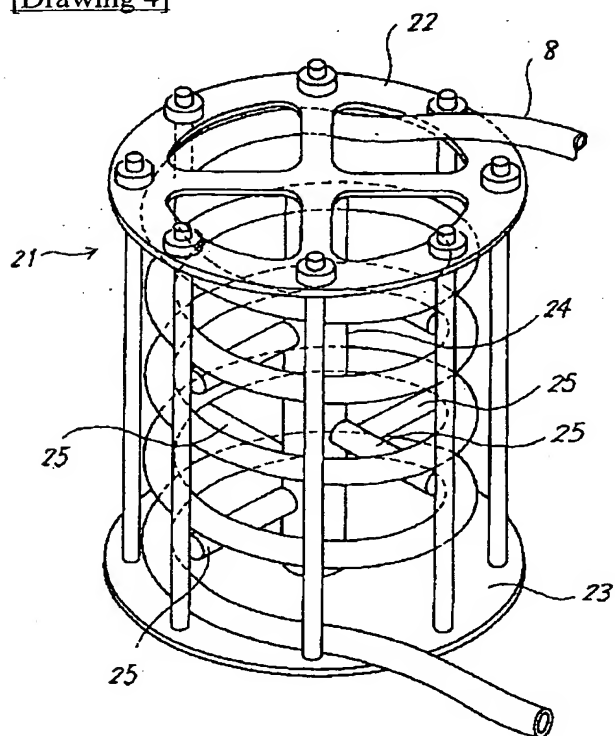


[Drawing 3]



15---引張ばね

[Drawing 4]



21---籠体

25---支持棒

[Translation done.]